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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,657	03/23/2001	Jenoe Tihanyi	GR 00 P 1579	6035

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LERNER AND GREENBERG, P.A.  
Post Office Box 2480  
Hollywood, FL 33022-2480

EXAMINER

PRENTY, MARK V

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 01/09/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/815,657

Applicant(s)  
TIHANYI

Examiner  
Prenty

Art Unit  
2822



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Dec 2, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-17 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5 6) ☐ Other:

This Office Action is in response to the amendment filed December 2, 2002.

Claims 1 and 2 are rejected under 35 U.S.C. §103(a) as being unpatentable over Reddi (United States Patent 3,296,462, already of record) together with Liu et al. (United States Patent 6,097,061, already of record).

With respect to independent claim 1, Reddi discloses a semiconductor configuration (see the entire patent, particularly Fig. 1), comprising: a semiconductor body including first and second connection zones 12 and 14 of a first conductivity type, a channel zone 26 of the first conductivity type, at least one control electrode 24, and an insulation layer 22.

The difference between Reddi's semiconductor device and claim 1's semiconductor device is the latter's insulation layer surrounds the control electrode (i.e., the latter's insulated control gate electrode is formed in, rather than on, the substrate).

Liu et al. teach improving an MOS device's scaling by forming its insulated gate in, rather than on, the substrate (see the entire patent).

It would have been obvious to one skilled in this art to improve Reddi's MOS device's scaling by forming its insulated gate in, rather than on, the substrate, as taught by Liu et al.

Claim 1 is thus rejected under 35 U.S.C. §103(a) as being unpatentable over Reddi together with Liu et al.

With respect to dependent claim 2, at least one of Reddi's first and second connection zones 12 and 14 has a first dimension in the vertical direction and a second dimension in the lateral direction between the first and second connection zones, with the second dimension smaller than the first dimension (see Reddi's Fig. 1).

Claim 2 is thus rejected under 35 U.S.C. §103(a) as being unpatentable over Reddi together with Liu et al.

Claim 3 is objected to as being dependent on a rejected base claim (i.e., claim 3 would be allowable over the prior art of record if claim 3 were amended to further include all the limitations of independent claim 1).

Claim 4 is objected to as being dependent on a rejected base claim (i.e., claim 4 would be allowable over the prior art of record if claim 4 were amended to further include all the limitations of independent claim 1).

Claim 5 is objected to as being dependent on a rejected base claim (i.e., claim 5 would be allowable over the prior art of record if claim 5 were amended to further include all the limitations of independent claim 1).

Claim 6 is objected to as being dependent on a rejected base claim (i.e., claim 6 would be allowable over the prior art of record if claim 6 were amended to further include all the limitations of independent claim 1).

Claim 7 is objected to as being dependent on a rejected base claim (i.e., claim 7 would be allowable over the prior art of record if claim 7 were amended to further include all the limitations of independent claim 1).

Claim 8 is objected to as being dependent on a rejected base claim (i.e., claim 8 would be allowable over the prior art of record if claim 8 were amended to further include all the limitations of independent claim 1).

Claim 9 is objected to as being dependent on a rejected base claim (i.e., claim 9 would be allowable over the prior art of record if claim 9 were amended to further include all the limitations of independent claim 1).

Claim 10 is objected to as being dependent on a rejected base claim (i.e., claim

10 would be allowable over the prior art of record if claim 10 were amended to further include all the limitations of independent claim 1).

Claim 11 is objected to as being dependent on a rejected base claim (i.e., claim 11 would be allowable over the prior art of record if claim 11 were amended to further include all the limitations of independent claim 1).

Claim 12 is objected to as being dependent on a rejected base claim (i.e., claim 12 would be allowable over the prior art of record if claim 12 were amended to further include all the limitations of independent claim 1 and dependent claim 11).

Claim 13 is objected to as being dependent on a rejected base claim (i.e., claim 13 would be allowable over the prior art of record if claim 13 were amended to further include all the limitations of independent claim 1).

Claim 14 is objected to as being dependent on a rejected base claim (i.e., claim 14 would be allowable over the prior art of record if claim 14 were amended to further include all the limitations of independent claim 1 and dependent claim 13).

Claim 15 is objected to as being dependent on a rejected base claim (i.e., claim 15 would be allowable over the prior art of record if claim 15 were amended to further include all the limitations of independent claim 1 and dependent claim 4).

Claim 16 is objected to as being dependent on a rejected base claim (i.e., claim 16 would be allowable over the prior art of record if claim 16 were amended to further include all the limitations of independent claim 1 and dependent claim 4).

Claim 17 is objected to as being dependent on a rejected base claim (i.e., claim 17 would be allowable over the prior art of record if claim 17 were amended to further include all the limitations of independent claim 1 and dependent claim 6).

Applicant's arguments with respect to the rejection of claim 1 under 35 U.S.C. §103(a) as being unpatentable over Reddi together with Liu et al. are not persuasive, because the applicant fails to even squarely address, let alone rebut, the rejection.

Specifically, the applicant fails to even address, let alone rebut, the crux of the 35 U.S.C. §103(a) rejection (i.e., "The difference between Reddi's semiconductor device and claim 1's semiconductor device is the latter's insulation layer surrounds the control electrode (i.e., the latter's insulated control gate electrode is formed in, rather than on, the substrate). Liu et al. teach improving an MOS device's scaling by forming its insulated gate in, rather than on, the substrate (see the entire patent). It would have been obvious to one skilled in this art to improve Reddi's MOS device's scaling by forming its insulated gate in, rather than on, the substrate, as taught by Liu et al.").

Applicant's amendment necessitated the new ground of rejection. Accordingly, **THIS ACTION IS MADE FINAL.** See M.P.E.P. §706.07(a). Applicant is reminded of the extension of time policy set forth in 37 C.F.R. §1.136(a).

**Applicant's reply to the final rejection must include cancellation of, or appeal from the rejection of, each rejected claim (i.e., the applicant's reply to the final rejection must include cancellation of, or appeal from the rejection of, claims 1 and 2). 37 CFR 1.113.**

**An amendment filed under 37 CFR 1.116 should cancel finally rejected claims 1 and 2, amend claims 3-17 as discussed above, and not add any claims, so that the application can be allowed with the allowed claims consisting of amended claims 3-17.**

**A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT**

MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. §1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Registered practitioners can telephone the examiner at (703) 308-4939. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the application's Serial Number. Technology Center 2800's general telephone number is (703) 308-0956.

Mark Prentz  
Mark V. Prentz  
Primary Examiner